EXHIBIT # 29

Descriptions of the 14 Best Management Practices

1. WATER SURVEY PROGRAMS FOR SINGLE-FAMILY RESIDENTIAL AND MULTI-FAMILY RESIDENTIAL CUSTOMERS

Description
These water-survey programs must include indoor and outdoor components and, at minimum, must:

(1) Check for leaks, including leaks in toilets and faucets, and check meters for accuracy;
(2) Check showerhead flow rates and aerator flow rates, and offer to replace or recommend replacement of showerheads and aerators, as necessary;
(3) Check toilet flow rates and offer to install or recommend installing toilet displacement devices or direct customer to ultra-low flush toilet (ULFT) replacement program, as necessary;
(4) Replace leaking toilet flappers, as necessary;
(5) Check irrigation systems and timers; and
(6) Review or develop customer irrigation schedules.

Surveys also may include:

(1) Measurements of currently landscaped areas;
(2) Measurements of total irrigable areas;
(3) Providing customers with evaluation results and water-savings recommendations;
(4) Leaving information packets with customers; and
(5) Tracking of surveys offered, surveys completed, survey results, and survey costs.

Compliance Requirements
At least 15% of all single-family residential accounts and 15% of all multi-family residential units must receive water use surveys within 10 years.

Water Savings Estimates
Water savings from residential surveys are calculated by CUWCC using an average water savings per survey estimate. CUWCC estimates that the average water savings per survey are between 21 gallons per day per single-family survey and 8.8 gallons per day per multi-family survey. Additional information is available in the technical memorandum entitled "BMP Reporting Database Water Savings Calculations" by David Mitchell, M. Cubed.

Agency/Contractors Program Status
Contractors operate programs to implement this BMP and have completed 24,053 surveys of single-family residential accounts and 2,744 multi-family units.

2. RESIDENTIAL PLUMBING RETROFIT

Description
These residential plumbing retrofit programs require continuous distribution and/or direct installation of high-quality, low-flow showerheads (rated 2.5 gallons per minute or less), toilet displacement devices, toilet flappers, and faucet aerators to not less than 5% of single-family connections and multi-family units each year, or require through enforceable ordinance the replacement of high-flow showerheads and other water using fixtures with their low-flow counterparts, until it can be demonstrated that 75% of single-family residences and 75% of multi-family units are fitted with high-quality, low-flow showerheads.

Compliance Requirements
Plumbing device distribution and installation programs are to be operated until it can be demonstrated that 75% of single-family residences and 75% of multi-family units constructed prior to 1992 are fitted with high-quality, low-flow showerheads; or the enactment of an enforceable

ordinance requiring the replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts.

Water Savings Estimates
Water savings from residential plumbing retrofits are calculated by CUWCC using an average water savings per low-flow showerhead. CUWCC estimates that the average water savings per low-flow showerhead is 5.5 gallons per day. Additional information is available in the technical memorandum entitled "BMP Reporting Database Water Savings Calculations" by David Mitchell, M. Cubed.

Agency/Contractors Program Status
Agency and contractors are compliant with this BMP and continue to distribute low-flow showerheads and aerators to customers.

3. SYSTEM WATER AUDITS, LEAK DETECTION AND REPAIR

Description
Contractors must annually complete a prescreening water system audit to determine if there is a need for a full-scale system audit. The prescreening water system audit shall be calculated as follows:

(1) Determine metered water sales;
(2) Determine other water system verifiable uses;
(3) Determine total water supply into the system;
(4) Divide metered sales plus other verifiable uses by total supply into the system.

If this quantity is less than 0.9, a full-scale system audit is indicated. When indicated, agencies shall complete water audits of their distribution systems using methodology consistent with that described in AWWA's *Water Audit and Leak Detection Guidebook*. Agencies shall advise customers whenever it appears possible that leaks exist on the customer's side of the water meter; perform distribution system leak detection when warranted and cost-effective; and repair leaks when found.

Compliance Requirements
Contractors shall maintain an active distribution system auditing program. Contractors shall repair identified leaks whenever cost-effective.

Water Savings Estimates
The CUWCC MOU states that unaccounted water losses are assumed to be no more than 10% of total water into the water supplier's system. However, CUWCC has determined that the data collected by the reporting database is not sufficient for calculating water savings from system water audits, leak detection and repair.

Agency/Contractors Program Status
Annually, Agency and contractors' water losses are less than 9% of the total water into the water systems. Agency and contactors' maintain leak detection programs and are compliant with this BMP.

4. METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

Description
Contractors are required to meter all new connections and bill by volume of use. A program shall be established for retrofitting existing unmetered connections and billing by volume of use. Contractors shall identify intra- and inter-water contractor disincentives or barriers to retrofitting mixed use commercial accounts with dedicated landscape meters, and conducting a feasibility study to assess the merits of a program to provide incentives to switch mixed use accounts to dedicated landscape meters.

Compliance Requirements
Within 10 years, 100% of accounts shall be metered and billed by volume of use.

Water Savings Estimate
Water savings from metering is calculated by the CUWCC using a 20% reduction in demand for each retrofitted account.

Agency/Contractors Program Status
All contractors' accounts are metered and billed by volume of use.

5. LARGE LANDSCAPE CONSERVATION PROGRAMS AND INCENTIVES

Description
The large landscape conservation programs must provide non-residential customers with support and incentives to improve their landscape water use efficiency. This support shall include, but not be limited to, the following:

(1) Identify accounts with dedicated irrigation meters and assign ETo-based water use budgets equal to no more than 100% of reference evapotranspiration per square foot of irrigated landscape area;
(2) Provide notices each billing cycle to dedicated irrigation meter accounts with water use budgets showing the relationship between the budget and actual consumption;
(3) Offer large landscape water use surveys to commercial/industrial/institutional accounts with mixed-use meters (survey must include: measurement of landscape area, measurement of total irrigable area, irrigation system check, and distribution uniformity analysis, review or develop irrigation schedules, and a customer survey report and information packet);
(4) Track survey offers, findings, devices installed, savings potential, and survey cost;
(5) Provide information on climate-appropriate landscape design, efficient irrigation equipment/management to new customers and change-of-service customer accounts.

The following measures should be offered when cost-effective:

(1) Landscape water use analysis/surveys;
(2) Voluntary water use budgets;
(3) Installing dedicated landscape meters;
(4) Training (multi-lingual where appropriate) in landscape maintenance, irrigation system maintenance, and irrigation system design;
(5) Financial incentives to improve irrigation system efficiency such as loans, rebates, and grants for the purchase and/or installing water efficient irrigation systems;
(6) Follow-up water use analyses/surveys consisting of a letter, phone call, or site visit where appropriate.

The large landscape conservation programs may also include:

(1) Installing climate appropriate water efficient landscaping at contractor facilities, and dual metering where appropriate;
(2) Provide customer notices prior to the start of the irrigation season alerting them to check their irrigation systems and make repairs as necessary;
(3) Provide customer notices at the end of the irrigation season advising them to adjust their irrigation system timers and irrigation schedules.

Compliance Requirements
The following objectives must be completed: (1) at least 90% of dedicated irrigation meter accounts must have ETo-based water use budgets; (2) not less than 10% of commercial/industrial/institutional accounts with mixed-use meters contacted and offered landscape water use surveys each year; (3) complete surveys for not less than 15% of CII accounts with mixed-use meters within 10 years.

Water Savings Estimate
Water savings from large landscape conservation programs are calculated by CUWCC using an average water savings per water budget and per surveyed site. CUWCC estimates that the average water savings per water budget is 19% and average water savings per survey is 15%.

Additional information is available in the technical memorandum entitled "BMP Reporting Database Water Savings Calculations" by David Mitchell, M. Cubed.

Agency/Contractors Program Status
Contractors have assigned 3,462 water budgets and have performed 235 large landscape surveys. Agency has implemented a regional mixed-use metered landscape survey program.

6. HIGH-EFFICIENCY CLOTHES WASHING MACHINE FINANCIAL INCENTIVE PROGRAMS

Description
Until January 1, 2007, contractors shall offer a financial incentive, if cost effective, for the purchase of high-efficiency clothes washing machines (HEW) meeting a water factor value of 9.5 or less.

Compliance Requirements
CUWCC developed a coverage goal (CG) system to more easily determine coverage progress, and allow agencies to obtain additional credit for promoting the purchase of ultra high efficiency machines with water factor values of 8.5 or less. The CG is based on the total quantity of dwelling units (single-family and multi-family) in each contractor's service territory. By 2007, 100% of the CG points must be earned.

CG = Total Dwelling Units x 0.048

Water Savings Estimates
The gross water savings from HEWs financial incentives that result in the purchase and installation HEWs with water factors (WF) equal to or less than 9.5 shall be calculated using the following formula:

$$GWS = 14 \text{ yr.} \times \sum_i N_i \times (13.3 - i) \times 1{,}170 \frac{\text{gal.}}{\text{yr.}}$$

Where:

N_i is the number of machines replaced with water factor i
($i < 9.5$)
13.3 is the Baseline WF for clothes washers sold in 1994, as supplied to Department of Energy by the Association of Home Appliance Manufacturers (AHAM).
14 years is the assumed average useful life of residential clothes washers (based on information from the Bern Kansas study).
1,170 gallons/year is the average change in water use for a unit change in water factor. This value was developed by the California Energy Commission.

Agency/Contractors Program Status
The Agency coordinates a regional residential clothes washing machine rebate program for the contractors. The Agency contracts with Electric Gas Industries Association (EGIA) to facilitate the point-of-purchase advertising, rebate printing and processing, and rebate payments to customers. Customers are rebated between $100 and $150 per ENERGY STAR® rated clothes washer and applications are available at the appliance store where the machines are purchased.

Since 1998, over 15,655 ENERGY STAR® rated washing machines have been rebated within the Agency's service area.

7. PUBLIC INFORMATION PROGRAMS

Description
Contractors must implement a public information program to promote water conservation and water conservation related benefits. The program should include, but is not limited to, providing speakers to employees, community groups and the media; using paid and public service advertising; using bill inserts or newsletters; providing information on customers' bills showing use in gallons per day for the last billing period compared to the same period the year before;

providing public information to promote water conservation practices; and coordinating with other government agencies, industry groups, public interest groups, and the media.

Compliance Requirements
Contractors shall maintain an active public information program to promote and educate customers about water conservation.

Water Savings Estimates
Specific water savings cannot be quantified because there are no credible studies completed to date evaluating water savings from public information programs.

Agency/Contractors Program Status
The Agency performs this BMP regionally for the benefit of the contractors. Each contractor also performs additional outreach activities for their service areas, including bill stuffers, advertisements, community events, newsletters, and direct mail water conservation program information. The Water Wisely Campaign is the Agency's annual outdoor water conservation, multi-media campaign. The six-week campaign includes paid print and broadcast advertising, direct mail in the form of water retailer bill stuffers, point of purchase information, and a booth at the Sonoma County Fair. The goal of the campaign is to engage citizens in the need for water conservation and offer resources to help them reduce their outdoor water use. New to the campaign for 2004 was the "Water Wisely Makeover," where one homeowner was randomly chosen from Sonoma County Fair attendees to receive a new, low-water use front yard, provided by the Water Agency, Friedman's Home Improvement, and the California Landscape Contractors Association. The table below shows the "Water Wisely Campaign" components.

Water Wisely Campaign Components	
Activity Level	**Components**
337	Comcast cable spots
90	Radio spots
12	The Press Democrat Newspaper
2,500	Canvas bags with outdoor water conservation message (Sonoma County Fair)
80,000	Bill insert for July/August residential and commercial water bills
4 months	Water conservation message displayed on Hwy.101 billboard

The Agency staffed a public education/water conservation exhibit at the Sonoma County Fair from July 27, 2004, to August 9, 2004.

8. SCHOOL EDUCATION PROGRAMS

Description
Contractors must implement a school education program to promote water conservation and water conservation related benefits. The education program shall include working with school districts and private schools in the contractors' service area to provide instructional assistance, educational materials, and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Education materials shall meet the state education framework requirements, and grade appropriate materials shall be distributed to grade levels K-3, 4-6, 7-8, and high school.

Compliance Requirements
Contractors shall maintain an active school education program to educate students in the contractors' service areas about water conservation and efficient water uses.

Water Savings Estimates

Specific water savings cannot be quantified because there are no credible studies completed to date evaluating water savings from school education programs.

Agency/Contractors Program Status
The Agency operates a K -- 8th grade in-class program, outdoor education programs, teacher training, and community education with water conservation as a primary emphasis regionally for the contractors. Table below lists program statistics since 1999. The Agency's education staff includes 2-full time permanent teachers, one temporary teacher, interns, and volunteers.

Regional Water Education Program	
Contacts	**Activity**
141,782	Customers received material, information, or other education programs from Water Agency
86,550	Customers were reached through direct community outreach
13,829	Students received direct instruction from Water Agency staff
1,223	Classes requested and received educational materials reaching 37,501 students
1,810	Adults participated with the classroom instruction
303	Classes participated in outdoor educational program
293	Classes participated in classroom instructional program
16	Teacher trainings were held for a total of 204 teachers

In addition, staff conducts an annual Water Conservation Calendar Contest and provides an annual Water Education Catalog of materials and services to all schools and teachers within the Water Agency's service area.

The Water Agency's curriculum and materials follow California state frameworks and meet all California science standards for schools.

The Water Agency's two full-time permanent teachers (Water Program Specialists) were recognized with the following awards:

2002 Informal Science Educators of the Year
Cary Olin and Daniel Kahane
California Science Teachers Association

2004 Informal Science Educator of the Year
Daniel Kahane
National Science Teachers Association

9. CONSERVATION PROGRAMS FOR COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL (CII) ACCOUNTS

Description
Contractors must identify and rank commercial, industrial, and institutional (CII) accounts according to water use. Contractors must also maintain at least one of the following programs:

(1) CII Water-Use Survey and Customer Incentives Program. Develop a customer targeting and marketing strategy to provide water use surveys and customer incentives to CII accounts such that 10% of each CII sector's accounts are surveyed within 10 years. Directly contact (via letter, telephone, or personal visit) and offer water use surveys and customer incentives to at least 10% of each CII sector on a repeating basis. Water use

surveys must include a site visit, an evaluation of all water-using apparatus and processes, and a customer report identifying recommended efficiency measures, their expected payback period and available contractor incentives. Within one year of a completed survey, follow-up via phone or site visit with customer regarding facility water use and water saving improvements. Contractors shall track customer contacts, accounts (or customers) receiving surveys, follow-ups, and measures implemented;

(2) CII Performance Target Goal Program. The performance target will be obtained by implementing water conservation programs to achieve annual water use savings by CII accounts by an amount equal to 10% of the baseline use of CII accounts in the contractor's service area over a ten-year period. Program examples include: restaurant pre-rinse spray valves, commercial clothes washers, commercial ultra low-flush toilets replacement programs.

Compliance Requirements

10% of each of the CII sector's accounts must accept a water use survey within 10 years of the date implementation of CII Water Use Survey and Customer Incentives Program is to commence.

Or

A reduction of annual water use by CII accounts by an amount equal to 10% of the annual baseline water use within 10 years of the date implementation of CII Conservation Performance Target Program is to commence

Water Savings Estimates

Commercial water reduction results from best management practices such as interior and landscape water surveys, plumbing codes, and other factors (includes savings accounted for in other BMPs). Estimated reduction in gallons per employee per day in year 2000 use occurring over the period 1980-2000: 12%.

Industrial water reduction results from best management practices, waste discharge fee, new technology, water surveys, plumbing codes and other factors (includes savings accounted for in other BMPs). Estimated reduction in gallons per employee per day in year 2000 use occurring over the period 1980-2000: 15%.

Water savings from a CII water use survey and customer inspection program are calculated by CUWCC using an average water savings per survey and the total water saved as reported for the performance target. CUWCC estimates that the average water savings per CII survey is 9% of the sites per audit water use. The total water saved for the performance target goal is reported directly to the CUWCC by each contractor. Additional information is available in the technical memorandum entitled "BMP Reporting Database Water Savings Calculations" by David Mitchell, M. Cubed.

Agency/Contractors Program Status

Contractors have performed 822 surveys in the commercial sector, 11 surveys in the industrial sector and 95 surveys in the institutional sector. Throughout the service area, 12,031 ultra-low flush toilets have been installed in businesses.

The Agency coordinates the regional pre-rinse spray valve program for the contractors. 781 spray valves have been installed.

10. WHOLESALE AGENCY ASSISTANCE PROGRAMS

Description

The Agency must provide support to its contractors in the form of financial incentives, technical assistance, program management and water shortage allocations.

The Agency shall provide financial incentives, or equivalent resources, as appropriate, beneficial, and mutually agreeable to its contractor customers to advance water conservation efforts and effectiveness.

The Agency shall provide conservation-related technical support and information to all contractors for whom it serves as a wholesale supplier. At a minimum this requires:

(1) Conducting, funding or promoting workshops addressing the following topics:
   (a) CUWCC procedures for calculating program savings, costs and cost-effectiveness;
   (b) Contactor BMP implementation reporting requirements;
   (c) Technical, programmatic, strategic or other pertinent issues and developments associated with water conservation activities in each of the following areas: ULFT replacement; residential retrofits; commercial, industrial and institutional surveys; residential and large turf irrigation; and conservation-related rates and pricing.

(2) The Agency is required to have the necessary staff or equivalent resources available to respond to contractors' technical and programmatic questions involving the CUWCC BMPs and their associated reporting requirements.

THE AGENCY and its contractors shall retain maximum local flexibility in designing and implementing locally cost-effective BMP conservation programs. Cooperatively designed regional programs are encouraged. When mutually agreeable and beneficial, the Agency may operate all or any part of the conservation-related activities which a given contractor is obligated to implement under the BMPs cost-effectiveness test.

The Agency shall work in cooperation with its customers to identify and remove potential disincentives to long-term conservation created by water shortage allocation policies; and to identify opportunities to encourage and reward cost-effective investments in long-term conservation shown to advance regional water supply reliability and sufficiency.

Compliance Requirements

The methodology used to verify compliance must conform to CUWCC standards and procedures, and the information reported must be sufficient to permit independent verification of each of the following topics:

(1) Cost-effectiveness assessments completed for each BMP the Agency is potentially obligated to support;
(2) Agency avoided cost per acre-foot of new water supplies;
(3) The total monetary amount of financial support, incentives, staff support and equivalent resources provided to contractors to assist, or to otherwise support, the implementation of BMPs;
(4) The total amount of verified water savings achieved by each Agency-assisted BMP;
(5) The Agency shall provide a written offer of support to each of its contractors, and request a response from each contractor.

Water Savings Estimate

Additional water savings from this water conservation program cannot be quantifiable because savings from each of the programs that are implemented by the Agency are already accounted for in the contractors BMPs.

Agency/Contractors Program Status

Agency provides financial, technical, and staff support to assist the contractors in implementing the BMPs.

11. CONSERVATION PRICING

Description

The Agency and contractors must eliminate non-conserving pricing and adopt conserving pricing. Non-conserving pricing provides no incentives to customers to reduce use, while conservation pricing provides incentives to customers to reduce average or peak use, or both.

Compliance Requirements

The Agency and contractors must maintain rate structure consistent with BMP 11's definition of conservation pricing.

Water Savings Estimates

There are no credible studies completed to date evaluating water savings from conservation rates.

Agency/Contractors Program Status
All contractors have implemented conservation pricing. Six of the ten contractors have tiered rates that go beyond conservation pricing required in this BMP.

12. CONSERVATION COORDINATOR

Description
The Agency and contractors are required to designate a water conservation coordinator and support staff whose duties include the following:

(1) Coordination and oversight of conservation programs and BMP implementation;
(2) Preparation and submittal of the CUWCC BMP Implementation Report;
(3) Communication and promotion of water conservation issues to contractors' senior management; coordination of water contractors' conservation programs with operations and planning staff; preparation of annual conservation budget; participation in the CUWCC, including regular attendance at CUWCC meetings; and preparation of the conservation elements of the contractor's Urban Water Management Plan.

Compliance Requirements
The Agency and contractors must staff and maintain the position of conservation coordinator and provide support staff as necessary.

Water Savings Estimates
This water conservation program is not quantifiable based on its program description above because there are no credible studies completed to date evaluating water savings from having a conservation coordinator on staff.

Agency/Contractors Program Status
Agency and contractors have assigned a conservation coordinator to implement the BMPs.

13. WATER WASTE PROHIBITION

Description
Contractors must enact and enforce measures prohibiting gutter flooding, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems, and non-recycling decorative water fountains.
Contractors shall also support efforts to develop state laws regarding exchange-type water softeners.

Compliance Requirements
Contractors shall adopt water waste prohibitions consistent with the description above.

Water Savings Estimates
Specific water savings cannot be quantified because there are no credible studies completed to date evaluating water savings from water waste prohibition.

Agency/Contractors Program Status
All contractors have adopted water waste ordinances that prohibit gutter flooding, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems, and non-recycling decorative water fountains.

14. RESIDENTIAL ULFT REPLACEMENT PROGRAMS

Description
The residential ULFT replacement programs consist of replacing existing high-water-using toilets with ultra-low flush (1.6 gallons or less) toilets in single-family and multi-family residences. The programs shall be at least as effective as requiring toilet replacement at time of resale.

Compliance Requirements
Water savings from Residential ULFT Replacement Programs are to equal or exceed water savings achievable through an ordinance requiring the replacement high-water-using toilets with ultra-low-flush toilets upon resale for 10 years.

Water Savings Estimate
Water savings from Residential ULFT Replacement Programs are calculated by CUWCC using an average water savings per toilet. CUWCC estimates that the average water savings per toilet is between 21 gallons per day and 27 gallons per day in a single family home. CUWCC estimates that the average water savings per toilet is between 27 gallons per day and 63 gallons per day in a multi family dwelling. Additional information is available in the technical memorandum entitled "BMP Reporting Database Water Savings Calculations" by David Mitchell, M. Cubed.

Agency/Contractors Program Status
Agency and contractors have installed a total of 110,350 ultra-low flush toilets. Some contractors are implementing a mandatory toilet replacement at-time-of-sale or at time of change in water service.

POLICY ANALYSIS FOR THE PUBLIC AND PRIVATE SECTORS
M.CUBED

Date: April 28, 2003

To: R&E Committee
Fr: David Mitchell, M.Cubed
Re: BMP Reporting Database Water Savings Calculations

This technical memorandum describes the assumptions and calculations used to estimate water savings associated with BMP activity reported to the CUWCC by signatory water suppliers.

Global Considerations:

- The models can calculate water savings for individual reporting units or for all reporting units submitting reports to the CUWCC. The only difference between the two approaches is that the in the case of the latter the models pull data for all reporting units that have submitted data to the CUWCC and in the case of the former the models pull for just the reporting unit being analyzed. Otherwise the calculations are identical.

- The models make no attempt to account for synergies between BMPs that could lead to an improvement in water savings or overlap between BMPs that could lead to double counting of savings. Rather water savings are simply calculated for each individual BMP. This is likely to produce some double counting of water savings between BMP 1 and BMP 2. The extent of the possible double counting is unknown.[1]

- The methods to calculate water savings closely follow those developed and used for the CUWA Conservation Potential Study.

- The default values used by the models to calculate water savings for the BMPs are stored on a default settings page. These values are linked to each BMP calculation page. Savings calculations can be based either on the default values or on user-specified values.

[1] Mike Hollis has suggested restricting BMP 2 to showerheads only and to changing the structure of BMP 1 so that user's define their residential survey's in terms of the devices and activities comprising it as a possible way to address overlap between BMP 1 and 2. User's could still have the option of going with a default value for average savings from residential surveys if the models netted out the contribution of showerhead replacements.

BMP 1 - Residential Water Surveys

Savings from residential surveys are calculated using an average water savings per survey estimate. Water savings are assumed to decay over time. Average water savings per survey are differentiated between single-family and multi-family surveys.

Default water savings and decay assumptions are:

Residential survey unit water savings (gpd):

- Single family - default savings from untargeted intensive home survey as reported on page 2-20 of BMP Costs & Savings Study (July 2000 ed.).

- Multi-family - default savings from untargeted intensive home survey less savings from turf audits shown in Table 1 of BMP Costs & Savings Study (July 2000 ed.).

Residential survey savings decay rate (%/yr):

- Default decay rate is the BMP 01 savings persistence assumptions used for California Urban Water Agencies' "Urban Water Conservation Potential," August 2001.

The calculation of water savings is as follows:

Variables:

S_n = number of surveys completed in year n.
GPD = average first year water savings per survey in gallons per day.
d = percent per year decay in water savings
AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

$$AFY_t = \sum_{n=1991}^{t} \frac{365 \times GPD \times S_n \times (1-d)^{(t-n)}}{325{,}900}$$

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

Database considerations:

- The calculation only pulls survey count data from a reporting unit for a given report year if the reporting unit has submitted the BMP01 form for that year to the

CUWCC. Survey count data from unsubmitted forms are not included in the calculation.

- Survey count data for years 1991-1998 are pulled from the bmp_history.fp5 database. Survey count data from the history database are pulled only if the reporting unit has submitted the history data to the CUWCC.

- Agencies that currently have not submitted history forms will have incentive to do so in order to have past activity included in the water savings calculations. If the history form has never been submitted to the CUWCC water agencies can do this without CUWCC assistance. If, however, the agency has already submitted the history form but now wishes to amend it, they will have to do so through the CUWCC database administrator.

BMP 2 - Showerhead (and other devices) Distribution

Savings from plumbing device distribution are calculated using an average savings per device estimate combined with an estimate of the probability of device installation. Water savings are assumed to decay over time due to the effects of device natural replacement (for showerheads) and depreciation.[2] Separate estimates of water savings are calculated for (1) showerheads, (2) toilet dams, (3) toilet flappers, (4) faucet aerators.

Default water savings and decay assumptions are:

Device installation probabilities (% of devices distributed):

- Default estimate uses mid-point of range cited on page 2-13 of BMP Costs & Savings Study (July 2000 ed.)

Device unit water savings (gpd)

- Default unit water savings from Tables 1 & 2, page 2-14, except for flappers. Flapper savings assumed to be 2 gpd. This is a placeholder.

Device natural replacement rates (%/yr)

- Default natural replacement rates are mid-points of ranges cited in Table 4, page 2-16 of BMP Costs & Savings Study (July 2000 ed.), except for flappers. Flappers savings decay assumed to be 20% per year. This is equivalent to a five year useful life. This is a placeholder value.

The calculation of water savings is as follows:

Variables:

D_n = number of devices distributed in year n.
P = probability distributed device is installed.
GPD = average water savings per installed device in gallons per day.
d = percent per year decay in water savings due to device natural replacement
AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

[2] Because of the current plumbing code, the probability that the old showerhead would have been replaced at some point during the useful life of the replacement provided by the water utility with a 2.5 gpm device is non-zero. This is the same effect that plumbing code has on toilet program water savings.

$$AFY_t = \sum_{n=1991}^{t} \frac{365 \times GPD \times P \times D_n \times (1-d)^{(t-n)}}{325{,}900}$$

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

Database considerations:

- The calculation only pulls device count data from a reporting unit for a given year if the reporting unit has submitted the BMP02 form for that year to the CUWCC. Survey count data from unsubmitted forms are not included in the calculation.

- The reporting system currently does not collect data on device distribution for the years 1991-1998. Consequently, BMP02 water savings for these years cannot be calculated. This could be changed by updating the bmp history form to record BMP02 device counts.

BMP 3 - Water System Audits and Leak Detection

The data collected by the BMP reporting system for BMP 3 is not sufficient for calculating BMP 3 water savings.

BMP 4 - Meter Retrofits

Savings from meter retrofits are calculated using an average percentage reduction in unmetered water demand (20%). Unmetered water use per connection is calculated from account and water use data reported on the Accounts and Water Use form (bmp_water_use.fp5). Water savings are assumed to persist without decay.

Default water savings assumptions are:

Avg. savings per metered account (% of pre-metered use)

- Default avg. water savings of 20% of pre-metered use is the water savings assumption listed in Section F of BMP 04 MOU Exhibit 1 definition.

- Avg. pre-metered use per account (AFY) is equal to the average water use per unmetered account for all customer classifications for all water suppliers reporting unmetered accounts. This information is pulled from the database bmp_water_use.fp5.[3]

[3] It may be possible to generate separate estimates for individual customer classes. This is something to explore further. Currently the model estimates savings based on average

The calculation of water savings is as follows:

Variables:

M_n = number of meter retrofits in year n.
U_n = average use (AFY) per unmetered account in year n.
R = average percent reduction in unmetered use following meter retrofit
AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

$$AFY_t = \sum_{n=1991}^{t} R \times M_n \times U_n$$

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

Database considerations:

- The calculation only pulls meter retrofit count data from a reporting unit for a given year if the reporting unit has submitted the BMP04 form for that year to the CUWCC. Meter retrofit count data from unsubmitted forms are not included in the calculation.

- The reporting system currently does not collect data on meter retrofit counts for the years 1991-1998. Consequently, BMP04 water savings for these years cannot be calculated. This could be changed by updating the bmp history form to record meter retrofit counts.

- The average use per umetered account calculated from bmp_water_use.fp5 does not differentiate between customer classes. This is because the meter retrofit counts in the database do not differentiate between customer classes.

BMP 05 - Large Landscape Programs

Water savings are calculated separately for (1) Eto-based budgets and (2) large landscape surveys.

Eto-based Budgets:

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use across all unmetered accounts. While this could introduce some bias it should be recognized that the overwhelming majority of currently unmetered accounts are residential. Thus the calculation is essentially estimating water savings for residential meter installations.

Water savings are calculated by assuming budgets produce an average percentage reduction in pre-budget water use. The average percentage reduction is based on empirical studies of pre and post water budget demand. Pre-budget use is estimated by taking the reported post-budget use and dividing by one minus the demand reduction percentage. Savings for budgets are assumed to persist for as long as the water supplier maintains the budget program.

Default water savings assumptions are:

- Default avg. savings per landscape budget of 19% is from Table 1, page 2-53, of BMP Costs & Savings Study (July 2000 ed.)
- Pre-budget use is equal to post budget use reported on BMP 5 form divided by (1-0.19)
- Implicitly, the calculation assumes that the budget is enforced by the utility and that non-compliance is not a major issue. As experience with budgets is gained over time, this implicit assumption may need to be revisited.

The calculation of water savings is as follows:

Variables:

U_n = total water use (AFY) reported for landscape accounts with budgets in year n.
R = Average percentage reduction in pre-budget annual landscape water use.
AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

$$AFY_t = \sum_{n=1991}^{t} R \times \frac{U_n}{(1-R)}$$

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

Large Landscape Surveys:

Water savings are calculated using an estimate of the average percentage reduction in pre-survey water use. Average use per surveyed site is calculated using assumptions about average landscape area and water use per acre as described below. Water savings are assumed to decay over time as a result of changes in property management, landscape personnel and equipment performance. The savings model and default assumption are based on the approach used in California Urban Water Agencies' "Urban Water Conservation Potential" (August 2001).

Default water savings assumptions are:

- Default avg. savings per landscape survey is drawn from the California Urban Water Agencies' "Urban Water Conservation Potential" (August 2001). This estimate was based on an informal survey of water conservation coordinators across California.

- Default avg. area per landscape survey is drawn from the California Urban Water Agencies' "Urban Water Conservation Potential"(August 2001). This estimate was based on an informal survey of water conservation coordinators across California.

- Default avg. water use per acre is drawn from the California Urban Water Agencies' "Urban Water Conservation Potential" (August 2001). This is a weighted average for California based on expected coverage requirements by geographic region.

- Default avg. water savings decay per year is drawn from the California Urban Water Agencies' "Urban Water Conservation Potential"

- (August 2001). This estimate was based on an informal survey of water conservation coordinators across California. The reliability of this estimate is considered low.

- The use of unweighted averages is an obvious limitation to the calculation. With additional investigation into regional differences in landscape size and water use it may be possible to refine the estimates in the future.

The calculation of water savings is as follows:

Variables:

S_n = number of large landscape surveys completed in year n.
A = average acres surveyed per large landscape survey
U = average pre-survey water use per acre of surveyed landscape (AFY/Acre)
R = average percentage reduction in pre-survey water use following a landscape survey
d = average annual percentage reduction in water savings
AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

$$AFY_t = \sum_{n=1991}^{t} R \times S_n \times A \times U \times (1-d)^{(t-n)}$$

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

Database considerations:

- The calculation only pulls landscape survey count data from a reporting unit for a given report year if the reporting unit has submitted the BMP05 form for that year to the CUWCC. Survey count data from unsubmitted forms are not included in the calculation.

- Survey count data for years 1991-1998 are pulled from the bmp_history.fp5 database. Survey count data from the history database are pulled only if the reporting unit has submitted the history data to the CUWCC.

BMP 6 - High Efficiency Washer Incentive Programs

Water savings are calculated using CUWCC-adopted estimates of water savings per machine. Savings are assumed to persist over the useful life of the washing machine. The model also accounts for program free-riders. Savings for program free-riders are zero. The default value for program free-riders is 10%. This is a placeholder value and is not based on any empirical study.

Default water savings assumptions are:

Avg. savings per washer (gpd):

- Default avg. savings per washer is the CUWCC estimate of reliable savings for residential HECW. 14.4 gpd.

Avg. washer life (yrs):

- Default avg. washer life is drawn from the California Urban Water Agencies' "Urban Water Conservation Potential" (August 2001). 14 years

Program freeridership (% of rebates)

- Model uses a placeholder value of 10%. Not based on empirical study. Value can be set to any level deemed appropriate by CUWCC.

The calculation of water savings is as follows:

Variables:

W_n = washer rebates awarded in year n.
S = average water savings per washer (gpd)
L = average useful life of washer
F = average rate of program freeridership

AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

$$AFY_t = \sum_{n=1991}^{t} \begin{cases} \dfrac{(1-F)\times W_n \times S \times 365}{325{,}900} & \forall \quad (t-n+1) \le L \\ 0 & \forall \quad (t-n+1) > L \end{cases}$$

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

Database considerations:

- The calculation only pulls washer rebate count data from reporting units for a given year if the reporting units have submitted the BMP06 form for that year to the CUWCC. Washer rebate count data from unsubmitted forms are not included in the calculation.

- The reporting system currently does not collect data on washer rebate counts for the years 1991-1998. Consequently, BMP06 water savings for these years cannot be calculated. This could be changed by updating the bmp history form to record washer retrofit counts. However, it unlikely that many washer rebates occurred before 1999.

- If legislation is enacted requiring that washers meet a minimum water efficiency the model may need to be modified to account for natural replacement and savings decay. In this case the method of calculation would be similar to BMP 14.

BMP 9a - CII ULFT Replacement Programs

Water savings are calculated using savings per toilet estimates from the CII ULFT Savings Study (2001). The model decays water savings at a rate of 4% per year to account for the effects of toilet natural replacement. This is equivalent to assuming a 25 year average useful life for CII toilets. The model also includes a free-ridership variable to account for the effects of free-riders on program savings. Currently, the default setting is 0%. This is simply a placeholder until the CUWCC decides if it wishes to assume a positive default value. Also, currently the model is set up assuming a single average rate of free-ridership across all program types (e.g. rebates, vouchers, direct install) and CII subcategories.

Estimates of water savings are calculated for each of the following CII subcategories: (1) offices, (2) retail/wholesale, (3) lodging, (4) health care, (5) industrial, (6) schools, (7) eating & drinking, (8) government, (9) churches, (10), other.

Default water savings and decay assumptions are:
Avg. savings per toilet (gpd):

- Default avg. savings per toilet by CII category are from the CUWCC's "CII ULFT Savings Study" (2nd ed.). The default savings assumption for schools is the same as the average savings for the "other" category. Recall that the CII ULFT Savings Study did not yield statistically significant water savings estimates for school ULFT replacements. The study identified several possible explanations, mostly to do with the highly selective nature of the available sample. The CUWCC will need to decide whether the default value for schools should be greater than 0, and if so, if it should be set to "other" as is currently the case.

CII toilet natural replacement rate:

- Default natural replacement rate is 4% per year, same as used in Exhibit 6 for residential toilets

Program freeridership (% of replacements):

- Default program freeridership rate is 0% due to lack of empirical estimates.

The calculation of water savings is as follows:

Note that separate calculations are done for each distinct toilet category. The formula indices do not show this to keep things simple.

Variables:

T_n = number of toilets replaced in year n.
GPD = gpd water savings per ULFT replacement
d = rate of toilet natural replacement (water savings decay)
F = rate of program free-ridership
AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

$$AFY_t = \sum_{n=1991}^{t} \frac{365 \times GPD \times (1-F) \times T_n \times (1-d)^{(t-n)}}{325{,}900}$$

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

Database considerations:

- The calculation only pulls CII replacement count data from reporting units for a given year if the reporting units have submitted the BMP09a or History form for that year to the CUWCC. CII toilet count data from unsubmitted forms are not included in the calculation.
- The CII subcategories in the History form differ slightly from those in the BMP09a form. This is because the categories for the History form was set up before the CII ULFT savings study was completed and the subcategories changed during the course of the study. For the most part the categories match, but in a few cases the categories in the History form had to be mapped to the categories in the BMP09a form. The mappings are as follows:

  From History to BMP 9a

  religious -> churches
  restaurant -> eating
  mfg -> industrial
  membership -> other
  multi -> other
  unknown -> other
  auto -> trade (retail/wholesale)
  food -> trade (retail/wholesale)
  retail -> trade (retail/wholesale)
  wholesale -> trade (retail/wholesale)

BMP 9 - CII Programs

Water savings are estimated for both BMP 9 tracks: (1) survey track and (2) performance track. For the survey track, savings are calculated following the approach used for BMPs 1 and 5. For the performance track, savings (AFY) are reported by water suppliers directly. The model simply adds up these reported water savings.

CII Surveys:

Default water savings assumptions are:

Avg. savings per CII survey (AFY

- Default avg. savings per CII survey is drawn from the California Urban Water Agencies' "Urban Water Conservation Potential" (August 2001). The estimate is

based on a weighted average savings calculated from a sample of 900 surveys completed in Southern California.[4]

Avg. savings decay rate (%/Yr):

- Default savings decay rate of 10% is drawn from the California Urban Water Agencies' "Urban Water Conservation Potential" (August 2001).

The calculation of water savings is as follows:

Variables:

CII_n = CII surveys completed in year n.
S = average first year water savings (AFY) per CII survey
d = average rate of decay in water savings (% per year)
AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

$$AFY_t = \sum_{n=1991}^{t} CII_n \times S \times (1-d)^{(t-n)}$$

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

BMP 9 Performance Target:

Default water savings assumptions are:

None. The model simply adds up annual water savings reported by water suppliers to the CUWCC.

Variables:
N_t = set of water suppliers reporting BMP 9 water savings in year t
S_i = Water savings reported by water supplier i
AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

$$AFY_t = \sum_{N_t} S_i \quad i \in N_t$$

[4] It may also be possible to use the data from this program to develop more refined estimates for CII subcategories.

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

Database considerations:

- The calculation only pulls CII water savings data from reporting units for a given year if the reporting units have submitted the BMP09 form for that year to the CUWCC. CII water savings data from unsubmitted forms are not included in the calculation.

- The estimate of water savings can be highly variable from year to year due to changes in the set of water suppliers reporting to the CUWCC each year.

BMP 14 - Residential ULFT Programs

Water savings are calculated based on the count of ULFT replacements reported to the CUWCC and an estimate of water savings per ULFT derived from the water savings formulas in section 2.6.5 of the BMP Costs & Savings Study (2000). Separate water saving estimates are made for single and multi family toilet replacements. Water savings are assumed to decay over time due to the combined effects of natural replacement and the plumbing code. The model also includes free-ridership variables to account for the effects of free-riders on program savings. Free-ridership rates are differentiated according to the method of replacement. The model has four distribution methods: (1) rebates, (2) direct install, (3) CBO, (4) unknown. Separate water savings calculations are made for each distribution method.

Default water savings assumptions are:

Avg. savings per residential toilet:

- Default single- and multi-family toilet savings are calculated using the water savings formulas on page 2-29 of the BMP Costs & Savings Study (July 2000 ed.) with statewide average housing density. Note the calculation could also be performed using housing density reported by each reporting unit. This was not done for (1) sake of simplicity and (2) because a number of reporting units have not provided this information to the CUWCC yet.

Avg. rate of program freeridership:

- Default freeridership rates are based on findings from the CUWCC's Residential ULFT Program Freeridership Study (2003). The default rate for replacements using an "unknown" method is 25%. The unknown category applies to all ULFT replacements reported on the History Form (1991 -1998). Thus the model

assumes early replacements had a free-ridership rate of 25%. This is a placeholder value.

Avg. rate of natural replacement:

- Default rate of natural replacement is 4% and is drawn from Exhibit 6 of the MOU.

Variables:
T_n = number of toilets replaced in year n
F = rate of program free-ridership (rates vary by method of repalcement)
GPD = water savings per ULFT (gpd; savings differ between single and multi family)
d = rate of natural replacement (water savings decay)
AFY_t = Annual water savings in year t
AF_t = Cumulative water savings between 1991 and year t

$$AFY_t = \sum_{n=1991}^{t} (1-F) \times T_n \times \frac{GPD \times 365}{325{,}900} \times (1-d)^{(t-n)}$$

$$AF_t = \sum_{n=1991}^{t} AFY_n$$

Database considerations:

- The calculation only pulls residential ULFT count data from reporting units for a given year if the reporting units have submitted the BMP14 or History form for that year to the CUWCC. Residential ULFT count data from unsubmitted forms are not included in the calculation.

- The calculation currently does not use housing density reported by water suppliers to calculate water savings because a significant number of water suppliers have not reported this information to the CUWCC. The model could be modified to use water supplier estimates of housing density.

Estimated Conservation From Quantifiable BMPs

In Acre-Feet per Year (AFY)

	FY 1993/1994	FY 1994/1995	FY 1995/1996	FY 1996/1997	FY 1997/1998	FY 1998/1999	FY 1999/2000	FY 2000/2001	FY 2001/2002	FY 2002/2003	FY 2003/2004
Santa Rosa											
BMP 1	15	49	83	150	192	195	183	268	258	241	212
BMP 2						28	42	91	139	145	152
BMP 4											
BMP 5						22	41	912	908	979	977
BMP 6						10	17	19	20	33	48
BMP 9	37	9	41	166	121	302	670	538	523	502	666
BMP 14	44	149	295	577	745	842	885	1,217	1,291	1,401	1,401
Total	**96**	**207**	**419**	**893**	**1,058**	**1,399**	**1,838**	**3,045**	**3,139**	**3,301**	**3,456**
Rohnert Park											
BMP 1											
BMP 2						16	23	27	32	35	39
BMP 4										1,235	1,235
BMP 5											118
BMP 6						3	3	5	5	7	10
BMP 9						26	28	28	29	-	38
BMP 14						102	141	155	180	199	215
Total	**-**	**-**	**-**	**-**	**-**	**147**	**195**	**215**	**246**	**1,476**	**1,655**
Petaluma											
BMP 1											
BMP 2						8	15	19	24	28	30
BMP 4											
BMP 5										9	9
BMP 6						5	6	10	10	14	19
BMP 9						25	31	39	41	42	80
BMP 14							25	36	51	63	74
Total	**-**	**-**	**-**	**-**	**-**	**38**	**77**	**104**	**126**	**156**	**212**
Valley of the Moon											
BMP 1											
BMP 2			3	3	4	4	4	5	5	7	9
BMP 4											
BMP 5											
BMP 6								1	1	2	3
BMP 9								4	4	5	21
BMP 14			32	32	46	46	46	61	64	68	72
Total	**-**	**-**	**35**	**35**	**50**	**50**	**50**	**71**	**74**	**82**	**105**
Cotati											
BMP 1											4
BMP 2											1
BMP 4											
BMP 5											
BMP 6											1
BMP 9											
BMP 14			4	5	7	7	7	7	10	11	14
Total	**-**	**-**	**4**	**5**	**7**	**7**	**7**	**7**	**10**	**11**	**20**
Forestville											
BMP 1											
BMP 2								1	2	2	2
BMP 4											
BMP 5											
BMP 6											1
BMP 9											3
BMP 14											
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**2**	**2**	**6**

EXHIBIT #31

	FY 1993/1994	FY 1994/1995	FY 1995/1996	FY 1996/1997	FY 1997/1998	FY 1998/1999	FY 1999/2000	FY 2000/2001	FY 2001/2002	FY 2002/2003	FY 2003/2004
Sonoma											
BMP 1											
BMP 2			2	5	5	5	5	5	5	5	5
BMP 4											
BMP 5										8	16
BMP 6						1	2	2	2	3	4
BMP 9											30
BMP 14			11	18	22	25	25	39	42	46	50
Total	-	-	**13**	**23**	**27**	**31**	**32**	**46**	**49**	**62**	**105**
North Marin											
BMP 1							6	17	24	30	33
BMP 2							3	9	15	21	28
BMP 4											
BMP 5									19	27	59
BMP 6							2	5	7	16	25
BMP 9										2	24
BMP 14							6	19	37	58	83
Total	-	-	-	-	-	-	**17**	**50**	**102**	**154**	**252**
Marin Municipal											
BMP 1	2	4	12	19	23	30	33	41	54	56	55
BMP 2	2	3	4	6	14	16	20	34	49	54	65
BMP 4											157
BMP 5	10	24	33	58	52	1,186	1,191	878	953	1,296	1,298
BMP 6						16	30	42	55	78	98
BMP 9		29	58	79	126	113	173	213	207	191	183
BMP 14	319	530	709	935	1,190	1,319	1,426	1,481	1,569	1,576	1,608
Total	**333**	**590**	**816**	**1,097**	**1,405**	**2,680**	**2,873**	**2,689**	**2,887**	**3,251**	**3,464**
Windsor											
BMP 1											1
BMP 2								1	2	2	2
BMP 4											
BMP 5											
BMP 6						1	3	3	3	3	5
BMP 9											3
BMP 14											
Total	-	-	-	-	-	**1**	**3**	**4**	**5**	**5**	**11**
Agency-wide Totals											
BMP 1	17	53	95	169	215	225	222	326	336	327	305
BMP 2	2	3	9	14	23	77	112	192	273	299	333
BMP 4	-	-	-	-	-	-	-	-	-	1,235	1,392
BMP 5	10	24	33	58	52	1,208	1,232	1,790	1,880	2,319	2,477
BMP 6	-	-	-	-	-	36	63	87	103	156	214
BMP 9	37	38	99	245	247	466	902	822	804	742	1,048
BMP 14	363	679	1,051	1,567	2,010	2,341	2,561	3,015	3,244	3,422	3,517
Total	**429**	**797**	**1,287**	**2,053**	**2,547**	**4,353**	**5,092**	**6,232**	**6,640**	**8,500**	**9,286**

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EXHIBIT #32: Water Conservation Measures Beyond the 14 Best Management Practices

The following water conservation programs are performed by the Agency and the retail water providers. These programs go beyond the requirements of the 14 Best Management Practices as defined by the CUWCC MOU Regarding Urban Water Conservation in California. Although these programs save water, the amounts cannot be quantified because there are no credible studies completed to date that evaluate and quantify the water savings associated from implementing them. These programs utilize new and innovative ideas and technologies to save water.

Pilot Weather-based Irrigation Controller Programs
These weather-based irrigation controller programs retrofit existing landscape irrigation controllers with new, self-adjusting weather-based irrigation controllers. Weather-based irrigation controllers save water by adjusting the watering schedule according to local climate conditions, reducing over watering plants and water running off to non-landscaped areas. The program will study the effectiveness of this new technology and its water savings potential.

Water Efficient Landscape Policy
This landscape policy requires water efficiency standards for new development in all commercial, residential and public sectors that require design review. The landscape policy provides requirements for water efficient irrigation systems, plant selection and soil preparation which reduce the water requirements of the new landscapes compared to typical landscape installations.

Synthetic Turf Installation Programs
Synthetic turf installation programs replace existing turf with high-performance synthetic turf, mainly on athletic playing fields. Replacing turf in this high traffic environment eliminates the high water usage necessary to maintain a satisfactory playing surface for outdoor sports such as soccer, football, and baseball. It is estimated that replacing one acre of turf with synthetic turf will save approximately 3 AFY of water.

Leak Detection Kit Distribution Program
Distribution of leak detection kits containing information on leak detection and repair, toilet leak detection tablets, and information on how to read their meters. Undetected leaks can go on for months, wasting hundreds of gallons of water per day. A leaking toilet can waste as much as 500 gallons per day. Reading the water meter and using dye tablets will show the presence of leaks.

Water Use Efficiency Calculator Program
This water-use efficiency calculator program is an interactive web-based program that allows customers to estimate their water usage and potential water and cost savings by becoming more efficient with their water usage. This program saves water by giving the water customers a personalized way to learn about water conservation as it applies to them. By using this tool, customers may be influenced to take actions to save water by

retrofitting existing fixtures to low-flow fixtures, fixing leaks, modifying their lifestyle, or managing landscape irrigation according to weather data.

Turf Watering Information Program
The turf water information program includes telephone hotlines and websites that provide weekly lawn-watering requirements based on local weather conditions. By providing accurate watering information, users will save water by reducing their watering time for their landscaping when weather conditions change from the seasonal norm.

Turf Removal Program
The turf removal program is an incentive program to encourage landscape improvements that convert existing turf areas to non-turf landscaping. Replacing turf with plants that require less water can reduce water requirements by one half.

Water-Wise Gardening CD
The *Water-Wise Gardening for Sonoma and Marin Counties* CD is an interactive CD-ROM that guides users in the selection of water efficient plants and landscape design. By designing a water efficient landscape, homeowners will use less water to maintain their landscape.

Xeriscape Gardens
Xeriscape gardens are used in public area landscape renovations, converting traditional typical lawn and shrub designs to climate adapted, low-water use plants to showcase water efficient design. These gardens will reduce water usage by changing the existing landscape's needs and through inspiring the public to do the same.

Water Conservation Restriction/Demand Offset Programs
These programs require water conservation measures and demand offset for new development. The goal is to encourage sustainable growth through development with "zero-foot print." Through water efficient design, conservation is built in and will save water for the life of the project. Demand offset will provide funding for more water conservation projects.

Irrigation Efficiency Rebate Program
The irrigation efficiency rebate program is an incentive program for dedicated irrigation meter customers. An incentive amount is provided for each billing unit saved below their assigned budget amount to encourage landscape water conservation.

Pressure Reducing Valve Pilot Study
The pressure reducing valve pilot study is aimed at determining the water savings from the installation of pressure reducing valves in a residential setting. Fixtures such as shower heads and faucets are designed to provide specific flow rates when operated at a standard water pressure. By preventing the water pressure from exceeding the standard, fixtures will not dispense water faster than intended. Regulating the water pressure will also reduce leaks which occur more frequently as water pressure increases. The pilot study will determine the effectiveness of the valves and their water savings potential.

	S. Rosa	Petaluma	NMWD	Rohnert	Sonoma	VOM	Cotati	Forest	MMWD	Windsor
Pilot Weather Based Irrigation Controller Programs	X		X		X	X	X		X	
Water Efficient Landscape Policy	X	X	X	X	X		X		X	
Synthetic Turf Installation Program		X	X						X	
Leak Detection Kit Distribution Program	X	X	X	X	X	X				
Water Use Efficiency Calculator	X									
Turf Watering Information Program	X								X	
Turf Removal Program			X							
Water Wise Gardening CD	X	X	X	X	X	X	X	X	X	X
Xeriscape Gardens		X	X	X	X				X	
Water Conservation Restrictions/Demand Offset Program		X	X	X						
Irrigation Efficiency Rebate Program	X	X	X							
Pressure Reducing Valve Pilot Study	X									

EXHIBIT #34
Water Conservation Funding

	FY 1998/1999	FY 1999/2000	FY 2000/2001	FY 2001/2002	FY 2002/2003	FY 2003/2004	FY 2004/2005	Past Spending TOTAL
				Past Spending				
Santa Rosa								
Agency Funds	$ 603,734	$ -	$ 1,207,468	$ 603,734	$ 603,734	$ 690,730	$ 603,734	$ 4,313,134
Additional WC spending	$ 32,139	$ -	$ 1,568,990	$ 2,020,288	$ 971,541	$ 288,952	$ 312,266	$ 5,194,177
Total	**$ 635,873**	**$ -**	**$ 2,776,458**	**$ 2,624,022**	**$ 1,575,275**	**$ 979,682**	**$ 916,000**	**$ 9,507,311**
Rohnert Park								
Agency Funds	$ 457,600	$ 351,200	$ -	$ 25,000	$ 155,601	$ -	$ 155,601	$ 1,145,002
Additional WC spending	$ 19,903	$ 41,437						$ 61,339
Total	**$ 477,503**	**$ 392,637**	**$ -**	**$ 25,000**	**$ 155,601**	**$ -**	**$ 155,601**	**$ 1,206,341**
Petaluma								
Agency Funds	$ 147,000	$ 45,000	$ 454,000	$ 658,000	$ 3,228,000	$ 340,000	$ 432,000	$ 5,304,000
Additional WC spending	$ 7,618	$ 14,405	$ 42,939	$ 29,593	$ 171,271	$ 200,000	$ 260,000	$ 725,826
Total	**$ 154,618**	**$ 59,405**	**$ 496,939**	**$ 687,593**	**$ 3,399,271**	**$ 540,000**	**$ 692,000**	**$ 6,029,826**
Valley of the Moon								
Agency Funds	$ 120,000	$ -	$ 60,000	$ 60,000	$ 66,390	$ -	$ 168,260	$ 474,650
Additional WC spending	$ 4,964	$ 96,896	$ 109,775	$ 91,043	$ 35,045	$ 76,425		$ 414,148
Total	**$ 124,964**	**$ 96,896**	**$ 169,775**	**$ 151,043**	**$ 101,435**	**$ 76,425**	**$ 168,260**	**$ 888,798**
Cotati								
Agency Funds	$ -	$ -	$ -	$ 63,000	$ 63,000	$ -	$ 63,000	$ 189,000
Additional WC spending			$ 11,000	$ 74,000	$ 10,000	$ 30,000	$ 48,600	$ 173,600
Total	**$ -**	**$ -**	**$ 11,000**	**$ 137,000**	**$ 73,000**	**$ 30,000**	**$ 111,600**	**$ 362,600**
Forestville								
Agency Funds	$ -	$ -	$ 99,585	$ -	$ -	$ -	$ -	$ 99,585
Additional WC spending								
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 99,585**
Sonoma								
Agency Funds	$ -	$ -	$ 124,000	$ 124,000	$ -	$ 62,241		$ 310,241
Additional WC spending	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total	**$ -**	**$ -**	**$ 124,000**	**$ 124,000**	**$ -**	**$ 62,241**	**$ -**	**$ 310,241**
North Marin								
Agency Funds	$ -	$ 250,000	$ 311,000	$ 292,000	$ 349,000	$ 349,000	$ 349,000	$ 1,900,000
Additional WC spending								$ -
Total	**$ -**	**$ 250,000**	**$ 311,000**	**$ 292,000**	**$ 349,000**	**$ 349,000**	**$ 349,000**	**$ 1,900,000**
Marin Municipal								
Agency Funds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Additional WC spending								$ -
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Windsor								
Agency Funds								$ -
Additional WC spending	$ -	$ -	$ -	$ 39,747	$ 76,861	$ 94,637	$ 60,083	$ 271,328
Total	**$ -**	**$ -**	**$ -**	**$ 39,747**	**$ 76,861**	**$ 94,637**	**$ 60,083**	**$ 271,328**
Agency-wide Totals								
Grant Funding					$ 1,276,548	$ 51,988	$ 25,875	$ 1,354,411
Agency Funds	$ 1,328,334	$ 646,200	$ 2,256,053	$ 1,825,734	$ 4,465,725	$ 1,441,971	$ 1,771,595	$ 13,735,612
Additional WC spending	$ 64,624	$ 152,738	$ 1,732,704	$ 2,254,671	$ 1,264,718	$ 690,014	$ 680,949	$ 6,840,418
Total	**$ 1,392,958**	**$ 798,938**	**$ 3,988,757**	**$ 4,080,405**	**$ 7,006,991**	**$ 2,183,973**	**$ 2,478,419**	**$ 21,930,441**

Cotati funding through FY 2007/2008; Windsor and Forestville funding through FY 2004/2005; No data for MMWD.
All numbers subject to budget approval.

EXHIBIT #34
Water Conservation Funding

	FY 2005/2006	FY 2006/2007	FY 2007/2008	FY 2008/2009	FY 2009/2010	FY 2010/2011	FY 2011/2012	FY 2012/2013
	Future Spending							
Santa Rosa								
Agency Funds	$ 603,734	$ 603,734	$ 603,734					
Additional WC spending	$ 312,266	$ 312,266	$ 312,266	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000
Total	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**
Rohnert Park								
Agency Funds	$ 155,601	$ 155,601	$ 99,813					
Additional WC spending			$ 70,187	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000
Total	**$ 155,601**	**$ 155,601**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**
Petaluma								
Agency Funds	$ 743,694	$ 743,694	$ 443,695					
Additional WC spending	$ 260,000	$ 260,000	$ 260,000	$ 260,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000
Total	**$ 1,003,694**	**$ 1,003,694**	**$ 703,695**	**$ 260,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**
Valley of the Moon								
Agency Funds	$ 66,390	$ 66,390	$ 53,470					
Additional WC spending	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
Total	**$ 116,390**	**$ 116,390**	**$ 103,470**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**
Cotati								
Agency Funds	$ 42,118	$ 42,118	$ 42,118					
Additional WC spending	$ 60,000	$ 60,000						
Total	**$ 102,118**	**$ 102,118**	**$ 42,118**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Forestville								
Agency Funds								
Additional WC spending								
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Sonoma								
Agency Funds	$ 104,055	$ 104,055	$ 104,055					
Additional WC spending	$ -	$ -	$ -	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000
Total	**$ 104,055**	**$ 104,055**	**$ 104,055**	**$ 72,000**	**$ 72,000**	**$ 72,000**	**$ 72,000**	**$ 72,000**
North Marin								
Agency Funds	$ 349,000	$ 349,000	$ 327,311					
Additional WC spending	$ 175,000	$ 175,000	$ 175,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000
Total	**$ 524,000**	**$ 524,000**	**$ 502,311**	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 450,000**
Marin Municipal								
Agency Funds								
Additional WC spending								
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Windsor								
Agency Funds								
Additional WC spending								
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Agency-wide Totals								
Grant Funding	$ 152,153	$ 152,153	$ 74,528	$ -	$ -	$ -	$ -	$ -
Agency Funds	$ 2,064,592	$ 2,064,592	$ 1,674,196	$ -	$ -	$ -	$ -	$ -
Additional WC spending	$ 857,266	$ 857,266	$ 867,453	$ 1,918,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000
Total	**$ 3,074,011**	**$ 3,074,011**	**$ 2,616,177**	**$ 1,918,000**	**$ 2,058,000**	**$ 2,058,000**	**$ 2,058,000**	**$ 2,058,000**

Cotati funding through FY :
All numbers subject to bud

EXHIBIT #34
Water Conservation Funding

	FY 2013/2014	FY 2014/2015	FY 2015/2016	FY 2016/2017	FY 2017/2018	FY 2018/2019	FY 2019/2020	Future Spending TOTAL
				Future Spending				
Santa Rosa								
Agency Funds								$ 1,811,202
Additional WC spending	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 11,928,798
Total	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 13,740,000
Rohnert Park								
Agency Funds								$ 411,015
Additional WC spending	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 2,110,187
Total	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 2,521,202
Petaluma								
Agency Funds								$ 1,931,083
Additional WC spending	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 5,440,000
Total	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 7,371,083
Valley of the Moon								
Agency Funds								$ 186,250
Additional WC spending	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 750,000
Total	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 936,250
Cotati								
Agency Funds								$ 126,353
Additional WC spending								$ 120,000
Total	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 246,353
Forestville								
Agency Funds								$ -
Additional WC spending								$ -
Total	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sonoma								
Agency Funds								$ 312,165
Additional WC spending	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 864,000
Total	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 1,176,165
North Marin								
Agency Funds								$ 1,025,311
Additional WC spending	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 5,925,000
Total	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 6,950,311
Marin Municipal								
Agency Funds								$ -
Additional WC spending								$ -
Total	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Windsor								
Agency Funds								$ -
Additional WC spending								$ -
Total	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Agency-wide Totals								
Grant Funding	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 378,834
Agency Funds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,803,379
Additional WC spending	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 27,137,985
Total	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 33,320,198

Cotati funding through FY :
All numbers subject to bud

EXHIBIT #34
Water Conservation Funding

	FY 1998/1999	FY 1999/2000	FY 2000/2001	FY 2001/2002	FY 2002/2003	FY 2003/2004	FY 2004/2005	Past Spending TOTAL
Past Spending								
Santa Rosa								
Agency Funds	$ 603,734	$ -	$ 1,207,468	$ 603,734	$ 603,734	$ 690,730	$ 603,734	$ 4,313,134
Additional WC spending	$ 32,139	$ -	$ 1,568,990	$ 2,020,288	$ 971,541	$ 288,952	$ 312,266	$ 5,194,177
Total	**$ 635,873**	**$ -**	**$ 2,776,458**	**$ 2,624,022**	**$ 1,575,275**	**$ 979,682**	**$ 916,000**	**$ 9,507,311**
Rohnert Park								
Agency Funds	$ 457,600	$ 351,200	$ -	$ 25,000	$ 155,601	$ -	$ 155,601	$ 1,145,002
Additional WC spending	$ 19,903	$ 41,437						$ 61,339
Total	**$ 477,503**	**$ 392,637**	**$ -**	**$ 25,000**	**$ 155,601**	**$ -**	**$ 155,601**	**$ 1,206,341**
Petaluma								
Agency Funds	$ 147,000	$ 45,000	$ 454,000	$ 658,000	$ 3,228,000	$ 340,000	$ 432,000	$ 5,304,000
Additional WC spending	$ 7,618	$ 14,405	$ 42,939	$ 29,593	$ 171,271	$ 200,000	$ 260,000	$ 725,826
Total	**$ 154,618**	**$ 59,405**	**$ 496,939**	**$ 687,593**	**$ 3,399,271**	**$ 540,000**	**$ 692,000**	**$ 6,029,826**
Valley of the Moon								
Agency Funds	$ 120,000	$ -	$ 60,000	$ 60,000	$ 66,390	$ -	$ 168,260	$ 474,650
Additional WC spending	$ 4,964	$ 96,896	$ 109,775	$ 91,043	$ 35,045	$ 76,425		$ 414,148
Total	**$ 124,964**	**$ 96,896**	**$ 169,775**	**$ 151,043**	**$ 101,435**	**$ 76,425**	**$ 168,260**	**$ 888,798**
Cotati								
Agency Funds	$ -	$ -	$ -	$ 63,000	$ 63,000	$ -	$ 63,000	$ 189,000
Additional WC spending			$ 11,000	$ 74,000	$ 10,000	$ 30,000	$ 48,600	$ 173,600
Total	**$ -**	**$ -**	**$ 11,000**	**$ 137,000**	**$ 73,000**	**$ 30,000**	**$ 111,600**	**$ 362,600**
Forestville								
Agency Funds	$ -	$ -	$ 99,585	$ -	$ -	$ -	$ -	$ 99,585
Additional WC spending								
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 99,585**
Sonoma								
Agency Funds	$ -	$ -	$ 124,000	$ 124,000	$ -	$ 62,241		$ 310,241
Additional WC spending	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total	**$ -**	**$ -**	**$ 124,000**	**$ 124,000**	**$ -**	**$ 62,241**	**$ -**	**$ 310,241**
North Marin								
Agency Funds	$ -	$ 250,000	$ 311,000	$ 292,000	$ 349,000	$ 349,000	$ 349,000	$ 1,900,000
Additional WC spending								$ -
Total	**$ -**	**$ 250,000**	**$ 311,000**	**$ 292,000**	**$ 349,000**	**$ 349,000**	**$ 349,000**	**$ 1,900,000**
Marin Municipal								
Agency Funds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Additional WC spending								$ -
Total	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Windsor								
Agency Funds								$ -
Additional WC spending	$ -	$ -	$ -	$ 39,747	$ 76,861	$ 94,637	$ 60,083	$ 271,328
Total	**$ -**	**$ -**	**$ -**	**$ 39,747**	**$ 76,861**	**$ 94,637**	**$ 60,083**	**$ 271,328**
Agency-wide Totals								
Grant Funding					$ 1,276,548	$ 51,988	$ 25,875	$ 1,354,411
Agency Funds	$ 1,328,334	$ 648,200	$ 2,256,053	$ 1,825,734	$ 4,465,725	$ 1,441,971	$ 1,771,595	$ 13,735,612
Additional WC spending	$ 64,624	$ 152,738	$ 1,732,704	$ 2,254,671	$ 1,264,718	$ 690,014	$ 680,949	$ 6,840,418
Total	**$ 1,392,958**	**$ 798,938**	**$ 3,988,757**	**$ 4,080,405**	**$ 7,006,991**	**$ 2,183,973**	**$ 2,478,419**	**$ 21,930,441**

Cotati funding through FY 2007/2008; Windsor and Forestville funding through FY 2004/2005; No data for MMWD.
All numbers subject to budget approval.

EXHIBIT #34
Water Conservation Funding

	FY 2005/2006	FY 2006/2007	FY 2007/2008	FY 2008/2009	FY 2009/2010	FY 2010/2011	FY 2011/2012	FY 2012/2013
				Future Spending				
Santa Rosa								
Agency Funds	$ 603,734	$ 603,734	$ 603,734					
Additional WC spending	$ 312,266	$ 312,266	$ 312,266	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000
Total	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**
Rohnert Park								
Agency Funds	$ 155,601	$ 155,601	$ 99,813					
Additional WC spending			$ 70,187	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000
Total	**$ 155,601**	**$ 155,601**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**
Petaluma								
Agency Funds	$ 743,694	$ 743,694	$ 443,695					
Additional WC spending	$ 260,000	$ 260,000	$ 260,000	$ 260,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000
Total	**$ 1,003,694**	**$ 1,003,694**	**$ 703,695**	**$ 260,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**
Valley of the Moon								
Agency Funds	$ 66,390	$ 66,390	$ 53,470					
Additional WC spending	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
Total	**$ 116,390**	**$ 116,390**	**$ 103,470**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**
Cotati								
Agency Funds	$ 42,118	$ 42,118	$ 42,118					
Additional WC spending	$ 60,000	$ 60,000						
Total	**$ 102,118**	**$ 102,118**	**$ 42,118**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Forestville								
Agency Funds								
Additional WC spending								
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Sonoma								
Agency Funds	$ 104,055	$ 104,055	$ 104,055					
Additional WC spending	$ -	$ -	$ -	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000
Total	**$ 104,055**	**$ 104,055**	**$ 104,055**	**$ 72,000**	**$ 72,000**	**$ 72,000**	**$ 72,000**	**$ 72,000**
North Marin								
Agency Funds	$ 349,000	$ 349,000	$ 327,311					
Additional WC spending	$ 175,000	$ 175,000	$ 175,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000
Total	**$ 524,000**	**$ 524,000**	**$ 502,311**	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 450,000**
Marin Municipal								
Agency Funds								
Additional WC spending								
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Windsor								
Agency Funds								
Additional WC spending								
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Agency-wide Totals								
Grant Funding	$ 152,153	$ 152,153	$ 74,528	$ -	$ -	$ -	$ -	$ -
Agency Funds	$ 2,064,592	$ 2,064,592	$ 1,674,196	$ -	$ -	$ -	$ -	$ -
Additional WC spending	$ 857,266	$ 857,266	$ 867,453	$ 1,918,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000
Total	**$ 3,074,011**	**$ 3,074,011**	**$ 2,616,177**	**$ 1,918,000**	**$ 2,058,000**	**$ 2,058,000**	**$ 2,058,000**	**$ 2,058,000**

Cotati funding through FY :
All numbers subject to bud

EXHIBIT #34
Water Conservation Funding

	FY 2013/2014	FY 2014/2015	FY 2015/2016	FY 2016/2017	FY 2017/2018	FY 2018/2019	FY 2019/2020	Future Spending TOTAL
				Future Spending				
Santa Rosa								
Agency Funds								$ 1,811,202
Additional WC spending	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 916,000	$ 11,928,798
Total	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 916,000**	**$ 13,740,000**
Rohnert Park								
Agency Funds								$ 411,015
Additional WC spending	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 2,110,187
Total	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 2,521,202**
Petaluma								
Agency Funds								$ 1,931,083
Additional WC spending	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 5,440,000
Total	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 7,371,083**
Valley of the Moon								
Agency Funds								$ 186,250
Additional WC spending	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 750,000
Total	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 936,250**
Cotati								
Agency Funds								$ 126,353
Additional WC spending								$ 120,000
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 246,353**
Forestville								
Agency Funds								$ -
Additional WC spending								$ -
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Sonoma								
Agency Funds								$ 312,165
Additional WC spending	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 72,000	$ 864,000
Total	**$ 72,000**	**$ 72,000**	**$ 72,000**	**$ 72,000**	**$ 72,000**	**$ 72,000**	**$ 72,000**	**$ 1,176,165**
North Marin								
Agency Funds								$ 1,025,311
Additional WC spending	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 5,925,000
Total	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 6,950,311**
Marin Municipal								
Agency Funds								$ -
Additional WC spending								$ -
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Windsor								
Agency Funds								$ -
Additional WC spending								$ -
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Agency-wide Totals								
Grant Funding	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 378,834
Agency Funds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,803,379
Additional WC spending	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 2,058,000	$ 27,137,985
Total	**$ 2,058,000**	**$ 2,058,000**	**$ 2,058,000**	**$ 2,058,000**	**$ 2,058,000**	**$ 2,058,000**	**$ 2,058,000**	**$ 33,320,198**

Cotati funding through FY .
All numbers subject to bud

EXHIBIT #35
COST PER ACRE FOOT AND COST PER TOILET BY PROGRAM

YEARS AND TYPES OF PROGRAM	COST PER ACRE FOOT	AVERAGE COST PER TOILET
1992-1994 Pilot Study	**$1,634**	**$82.71**
1995-2001 City Wide Rebate	**$2,378**	**$97.05**
1996-1999 School Distribution	**$4,301**	**$116.00**
2001-2002 Direct Install	**$9,381**	**$240.00**

The City of Santa Rosa found that the cost per acre foot to implement a successful residential toilet replacement program increased from $1,634 in 1992 to $9,381 in 2002. City of Santa Rosa offered a number of toilet replacement programs (rebates, free toilets through school distribution and finally free direct toilet installation by plumbers) to encourage new participants who would voluntarily replace their high flow toilets with 1.6 gallon per flush ultra low flush toilets.